AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method to ventilate a rotary machine housed in a compartment having a ventilation air inlet and air exhaust, a variable speed ventilation fan and a temperature sensor, wherein said method comprises:

sensing a temperature level of the rotary machine, wherein the temperature level is sensed using an array of thermocouples mounted on a surface of or embedded within the rotary machine;

applying the sensed machine temperature level to a controller for said fan,

drawing ventilation flow through the compartment and over the machine;

determining whether the sensed machine temperature level is beyond a desired temperature level of the rotary machine, wherein the desired temperature level is determined by the controller, and

the controller setting an operational condition of the fan to adjust the ventilation flow through the compartment if the sensed machine temperature level is beyond the desired temperature level.

2. (Original) A method as in claim 1 wherein the rotary machine is a gas turbine and the ventilation flow moves, at least partially, over the gas turbine in an axial direction to the gas turbine.

3. (Original) A method as in claim 1 wherein the operational condition of the fan is a fan speed, and the controller adjusts a variable speed drive of the fan to increase or decrease a fan speed when the controller determines that the sensed machine temperature level is beyond the desired temperature level.

4. (Original) A method as in claim 1 wherein the compartment includes an end wall and a roof, wherein said ventilation air inlet is in said end wall and said ventilation air outlet is in said roof, and said fan is mounted on said roof.

5. (Currently Amended) A method as in claim 1 wherein the desired temperature level is at a ~~high~~ first temperature during cool down and hot restart transient operational modes of the rotary machine and at ~~the desired~~ a second temperature during steady state operation of the rotary machine, wherein the first temperature is hotter than the second temperature.

6. (Cancelled)

7. (Original) A method as in claim 1 wherein the rotary machine is a gas turbine having a combustor and the temperature level is sensed using an array of thermocouples mounted on a surface of or embedded within the gas turbine and said array is proximate to the combustor.

8. (Currently Amended) A method as in claim 1 wherein the sensed temperature level is an average of temperature readings from a plurality of temperature sensors mounted on an outer surface or embedded within ~~the~~ a gas turbine.

9. (Original) A method as in claim 1 further comprising sensing a exhaust temperature of the ventilation flow as the flow passes through the outlet, and adjusting a

speed of the fan if the sensed exhaust temperature differs from a predetermined exhaust temperature.

10. (Currently Amended) A method to ventilate an compartment housing a gas turbine, wherein the compartment includes an end wall having an inlet air opening, a roof with an outlet air opening and a fan ~~with a variable speed drive coupled to~~ adjacent the outlet air opening and said fan coupled to a variable speed drive including a controller, wherein said method comprises:

drawing ventilation air flow into the inlet air opening, ~~over~~ to the ~~machine~~ gas turbine and exhausting the air flow through the outlet, wherein a flow rate of the ventilation air is dependent on a speed of the fan;

sensing a temperature level of the ~~rotary machine~~ gas turbine based on signals from a plurality of temperature sensors mounted on a casing or embedded within the gas turbine, wherein the temperature sensor is an array of one or more thermocouples mounted on a surface or embedded within the gas turbine proximate to the combustor;

determining whether the sensed casing temperature is above or below a desired temperature level of the ~~rotary machine~~ gas turbine, wherein the desired temperature level is determined by the controller, and

the controller increasing or decreasing the speed of the fan to increase or decrease the flow rate through the compartment if the sensed casing temperature differs from the desired temperature level.

11. (Original) A method as in claim 10 wherein the ventilation flow moves, at least partially, over the gas turbine in an axial direction to the gas turbine.

12. (Currently Amended) A method as in claim 10 wherein the desired temperature level is at a ~~high~~ first temperature during cool down and hot restart transient operational modes of the gas turbine and at ~~the desired~~ a second temperature during steady state operation of the gas turbine, wherein the first temperature is hotter than the second temperature.

13. (Cancelled).

14. (Original) A method as in claim 10 wherein the temperature sensor is an array of one or more thermocouples mounted on a surface or embedded within the gas turbine and the sensed temperature level is an average of a plurality of temperature readings from the array of thermocouples.

15. (Currently Amended) A method ~~as in claim 10 further comprising~~ to ventilate an compartment housing a gas turbine, wherein the compartment includes an end wall having an inlet air opening, a roof with an outlet air opening and a fan adjacent the outlet air opening and said fan coupled to a variable speed drive including a controller, wherein said method comprises:

drawing ventilation air flow into the inlet air opening, to the gas turbine and exhausting the air flow through the outlet, wherein a flow rate of the ventilation air is dependent on a speed of the fan;

sensing a temperature level of the rotary machine gas turbine based on signals from a plurality of temperature sensors mounted on a casing or embedded within the gas turbine;

determining whether the sensed casing temperature is above or below a desired temperature level of the gas turbine, wherein the desired temperature level is determined by the controller;

the controller increasing or decreasing the speed of the fan to increase or decrease the flow rate through the compartment if the sensed casing temperature differs from the desired temperature level, and

sensing a exhaust temperature of the ventilation flow as the flow passes through the outlet, and increasing or decreasing the speed of the fan if the sensed exhaust temperature differs from the predetermined exhaust temperature.

16. (Currently Amended) A ventilated compartment for a rotary machine comprising:

said compartment having a roof, end walls and side walls with the machine arranged parallel or nearly parallel to the side walls and below the roof;

at least one ventilation air inlet located in to a first end wall of said end walls;

at least one ventilation air outlet on said roof and proximate to a second end wall opposite to said first end wall;

one or more fans for pulling ventilating air into said ventilation air inlets;

a variable speed drive coupled to said one or more fan motors;

at least one temperature sensor mounted on said machine and having an temperature sensor output, wherein the temperature sensor is an array of one or more thermocouples mounted on a surface or embedded within the rotary machine;

a fan controller receiving as an input the temperature sensor output, including a comparator for determining whether a temperature corresponding to the sensor output is above or below a reference temperature level determined by the controller, and generating an output control signal to the variable speed drive to adjust a speed of the fan if the reference temperature level is below or above the temperature corresponding to the sensor output.

17. (Original) A ventilated compartment as in claim 16 wherein the rotary machine is a gas turbine and the ventilation flow moves, at least partially, over the gas turbine in an axial direction to the gas turbine.

18. (Original) A ventilated compartment as in claim 16 wherein said fan is mounted on the roof.

19. (Currently Amended) A ventilated compartment as in claim 16 further comprising a temperature sensor in the outlet, and wherein the reference temperature is a high temperature during cool down and hot restart transient operational modes of the rotary machine ~~at the desired~~ and is a lower temperature during steady state operation of the rotary machine.

20. (Cancelled).

21. (Original) A ventilated compartment as in claim 16 wherein the rotary machine is a gas turbine having a combustor and the temperature sensor is an array of one or more thermocouples mounted on a surface or embedded within the gas turbine proximate to the combustor.

22. (Original) A ventilated compartment as in claim 21 wherein the sensed temperature level is an average of a plurality of temperature readings from a

corresponding plurality of temperature sensors mounted on an outer surface or embedded within the gas turbine.